

**FINAL WITHDRAWAL  
OF TOTAL MAXIMUM DAILY LOADS (TMDLS)  
FOR COPPER IN THE ARTHUR KILL  
AND THE KILL VAN KULL  
AND  
FINAL ESTABLISHMENT OF A TMDL  
FOR NICKEL IN THE  
HACKENSACK RIVER**

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## **EXECUTIVE SUMMARY**

Section 303(d)(1)(C) of the Clean Water Act (CWA) and EPA's implementing regulations (40 CFR Part 130) require States to identify those waterbodies that do not meet water quality standards after application of the technology-based limitations required by the Act. The States of New York and New Jersey have identified certain waters within the New York- New Jersey Harbor complex as "water quality-limited" due to specific metals and have assigned them a high priority for TMDL development.

This document summarizes the basis for two actions EPA has taken regarding metals in the New York-New Jersey Harbor. The two actions are: withdrawal of TMDLs for copper in the Arthur Kill and Kill Van Kull because those waters are not impaired for copper and effluent limitations required of point sources under Section 301(b) of the CWA are stringent enough to implement water quality standards for copper applicable to such waters; and the establishment of a TMDL for nickel in the Hackensack River. EPA is establishing the TMDL in the Hackensack River at the request of the New Jersey Department of Environmental Protection. In addition, EPA has determined that the Passaic River and Newark Bay are not water quality-limited for nickel and, at this time, do not require TMDLs for nickel.

## INTRODUCTION

Section 303(d)(1)(C) of the Clean Water Act and EPA's implementing regulations (40 CFR Part 130) require States to identify those waterbodies that do not meet water quality standards after application of the technology-based limitations required by the Act. The States of New York and New Jersey have identified certain waters within the New York- New Jersey Harbor complex as "water quality-limited" due to specific metals and have assigned them a high priority for TMDL development.

By definition, a TMDL specifies the allowable pollutant loading from all contributing sources (e.g., point sources, nonpoint sources, and natural background) at a level necessary to implement the applicable water quality standards, with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

On August 11, 1994, the U.S. Environmental Protection Agency (EPA), in cooperation with the New York State Department of Environmental Conservation (NYSDEC) and the New Jersey Department of Environmental Protection (NJDEP) public noticed (59 FR 41293) the proposed establishment of phase I Total Maximum Daily Loads/Waste Load Allocations/Load Allocations (TMDLs/WLAs/LAs) for copper, mercury, nickel and lead in New York-New Jersey Harbor. The supporting technical bases for these TMDLs/WLAs/LAs are contained in EPA's document entitled, *Total Maximum Daily Loads (TMDLs) for Copper, Mercury, Nickel and Lead in NY-NJ Harbor* (July 26, 1994) .

Based on the applicable water quality standards and use of a water quality model employed for the TMDL effort, certain waters were projected to exceed water quality standards. However, because of the limited ambient and loading data, the state of the model calibration was considered uncertain for the Raritan River/Bay, the Hackensack and Passaic Rivers, and Newark Bay. While the model projected exceedances in these waters, the available ambient data indicated that existing loads were adequate to meet applicable water quality standards. The proposed phase I TMDLs for these Harbor waters (Hackensack River, Passaic River, Newark Bay, and Raritan River/Bay) required that municipal and industrial loads be limited to their existing loads. As part of the phase I TMDL, additional data collection and modeling were required for these waters. The New Jersey Harbor Dischargers Group (NJHDG), agreed to undertake the monitoring and modeling effort needed to develop phase II TMDLs for these waters.

Since the time of the public notice, EPA issued a "Stay of Federal Water Quality Criteria for Metals; Water Quality Standards; Establishment of Numeric Criteria for Priority Pollutants; States' Compliance - Revision of Metals Criteria' Final Rules" (60 FR 22228, May 4, 1995), amending the National Toxics Rule. This action established dissolved criteria, for the protection of aquatic life, for nickel and lead in New Jersey. It was determined that, based on the dissolved nickel and lead criteria, insufficient data were available to establish phase I TMDLs for nickel and lead. The final TMDLs/WLAs/LAs, established on January 24, 1996 (61 FR 1930), were

only for copper and mercury and required further data collection and modeling. A requirement of the final phase I TMDL was to conduct further data collection and modeling to assess whether the Hackensack River, Passaic River, and/or Newark River/Bay were water quality-limited for copper, nickel and lead.

Subsequent to the establishment of TMDLs/WLAs/LAs for copper and mercury, the NJHDG's consultant, the Great Lakes Environmental Center, prepared a monitoring plan designed to enhance the ambient data base for the four metals of concern (copper, mercury, nickel, lead) in the Hackensack River, Passaic River, Newark Bay, and Raritan River/Bay ( the NJ Harbor waters). The initial phase of the monitoring effort was designed to collect sufficient ambient data to determine if these NJ Harbor waters were water quality-limited for any of the metals of concern. Based on the results of this data collection effort, certain metals and/or waters might require additional monitoring and modeling to develop TMDLs.

The results of the ambient data collected in the above-mentioned NJ Harbor waters are contained in *Summary of the Phase I Metals Sampling and Analysis Program for the New Jersey Component of the New York/New Jersey Harbor Estuary Program* (March 5, 1996) and in data evaluation supplement, *Revisions to the Metals Report* (March 26, 1996). Probability distributions were utilized to determine the potential for ambient exceedances of water quality criteria in these NJ Harbor waters. The distributions were designed to reflect the 4-day duration and once-in-three-year frequency of the ambient chronic aquatic-life based criteria (i.e., 99.63% exceedance frequency). The probability distributions of ambient data indicated the following:

- the mercury criterion is exceeded everywhere except in Raritan Bay;
- the copper criterion is not exceeded in the Hackensack River, Passaic River, Newark Bay, and Raritan River/Bay;
- the lead criterion is not exceeded in the Hackensack River, Passaic River, Newark Bay, and Raritan River/Bay; and
- the nickel criterion is exceeded in the Hackensack River and potentially in the Passaic River.

Based upon the above findings, EPA, therefore, withdrew the phase I copper TMDLs in the NJ Harbor waters (Hackensack and Passaic Rivers, Raritan River/Bay and Newark Bay) which had been established in January 1996. EPA public noticed its intent to withdraw the copper TMDLs in these NJ Harbor waters on January 10, 1997 (62 FR 1454). The final action to withdraw was on September 19, 1997 ( 62 FR 49226).

The findings above indicated that the Hackensack River was water quality-limited and that the Passaic River was potentially water quality-limited for nickel. Based on the data, EPA concluded that the Hackensack River would require a TMDL and the Passaic River required further data collection to determine whether the nickel criterion is exceeded. The NJHDG, with assistance from EPA, undertook further monitoring and modeling to provide data for TMDL

assessment and development. In addition, because the copper TMDL was still in effect in the remainder of the Harbor, the NJHDG questioned whether certain parts of the Harbor, the Arthur Kill and Kill Van Kull (the Kills), were actually water quality-limited for copper. Therefore, the NJHDG and EPA, undertook a joint monitoring and modeling effort to provide data for TMDL development for nickel in the Hackensack and Passaic Rivers, as necessary, and to assess the need for copper TMDLs in the Kills. These actions fulfill the requirements established under the Memorandum of Agreement (May 12, 1999) between NJDEP and EPA outlining the schedule for development of TMDLs in New Jersey. Under this Agreement, EPA had committed to completing the necessary TMDLs for metals in the New York-New Jersey Harbor by June 30, 1999.

## PART A

### WITHDRAWAL OF COPPER TMDLS IN THE ARTHUR KILL AND KILL VAN KULL

EPA established phase I TMDLs on January 24, 1996 (61 FR 1930) for copper and mercury in several areas of the Harbor, including the Kills. These TMDLs were established for the Kills because modeling projections indicated a potential exceedance of the applicable aquatic life-based copper criterion. Ambient data did not indicate any exceedances. The original modeling projections did not include any combined sewer overflows (CSO) or storm water (SW) data specific to New Jersey waters. Lacking these data, the modeling projections only included CSO and SW data from New York.

As described in the Introduction, several areas of the NJ Harbor waters (Hackensack and Passaic Rivers, Raritan River/Bay and Newark Bay) were determined not to be water quality limited for copper. Therefore, on September 19, 1997 (62 FR 49226) EPA withdrew the phase I TMDLs for copper in the above waters. This action did not affect the Kills. As part of this monitoring effort, the NJHDG, with assistance from EPA, conducted additional monitoring and modeling to reevaluate whether the Kills are still water quality-limited for copper.

The NJHDG undertook a monitoring and modeling program for the Kills in order to reconcile the differences between the ambient data and modeling projections. The modeling projections were updated with data from New Jersey CSOs and SW. The monitoring program included the collection of dissolved copper in ambient water samples and associated parameters (e.g., total suspended solids, dissolved organic and particulate carbon) three times under wet and six times under dry weather conditions at two sampling stations each in the Arthur Kill and the Kill Van Kull during the period May to October 1997. The municipal effluents discharging to the Arthur Kill (Joint Meeting, Linden Roselle and Rahway Valley) were sampled monthly. Two CSOs and one SW discharge were monitored five times during the period from July 1997 to February 1998. The data and modeling analyses are summarized in the report, *Monitoring and Modeling of Nickel in the Hackensack and Passaic Rivers and Newark Bay and Monitoring and Data Analysis for Copper in the Arthur Kill and Kill Van Kull* (August 27, 1998).

The ambient copper data collected under this current effort (May to October 1997) were combined with data collected in the initial monitoring phase (1991) to form a probability distribution. The distribution, shown in Figure 1, indicates that there is no probability of exceedance of the chronic aquatic life-based copper criterion ( $5.6 \mu\text{g/L}$ ) at the 99.63 percentile (the chronic compliance frequency). Note, that there is a high copper value of  $7.96 \mu\text{g/L}$  which is believed to have been contaminated and therefore, not an accurate value. Therefore, analysis of the ambient dissolved copper data indicate compliance with the criterion.

The CSO and SW data collected as part of this monitoring effort indicate that the total copper concentrations, measured as total recoverable concentrations, based on New Jersey data are much lower than those used in the original modeling effort which were based on New York data. Based on the New Jersey data, the mean CSO concentration is  $19.1 \mu\text{g/L}$ , as compared to the

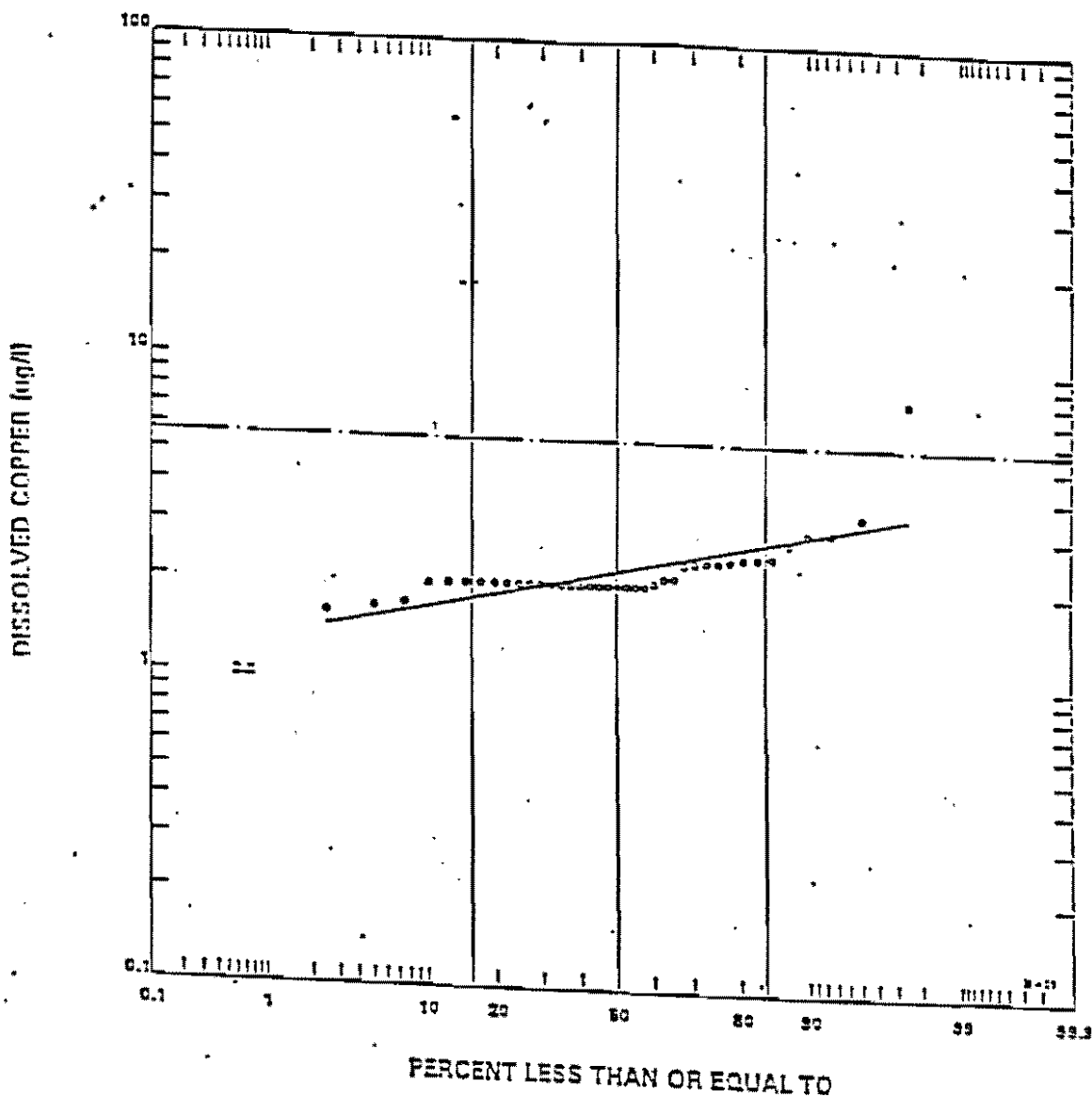


Figure 1

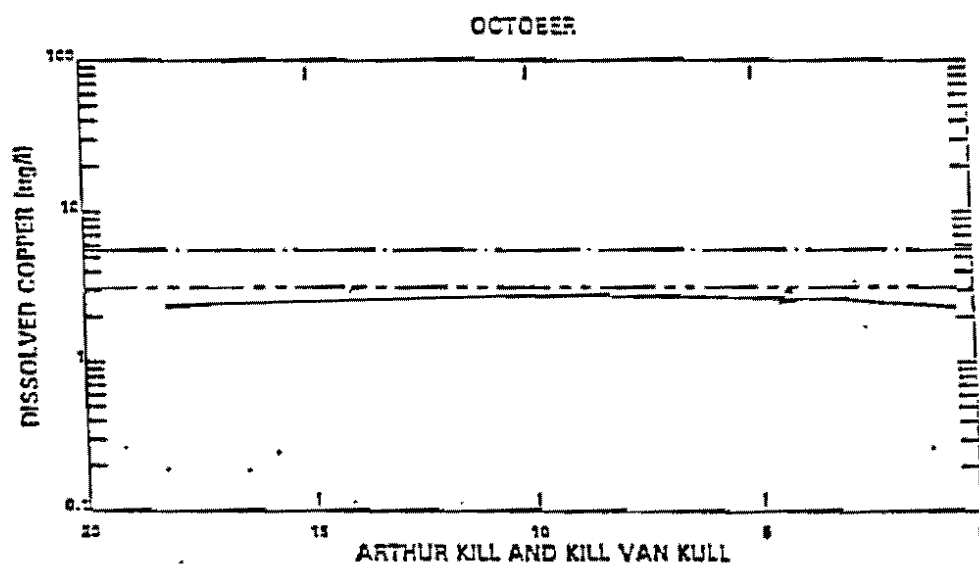
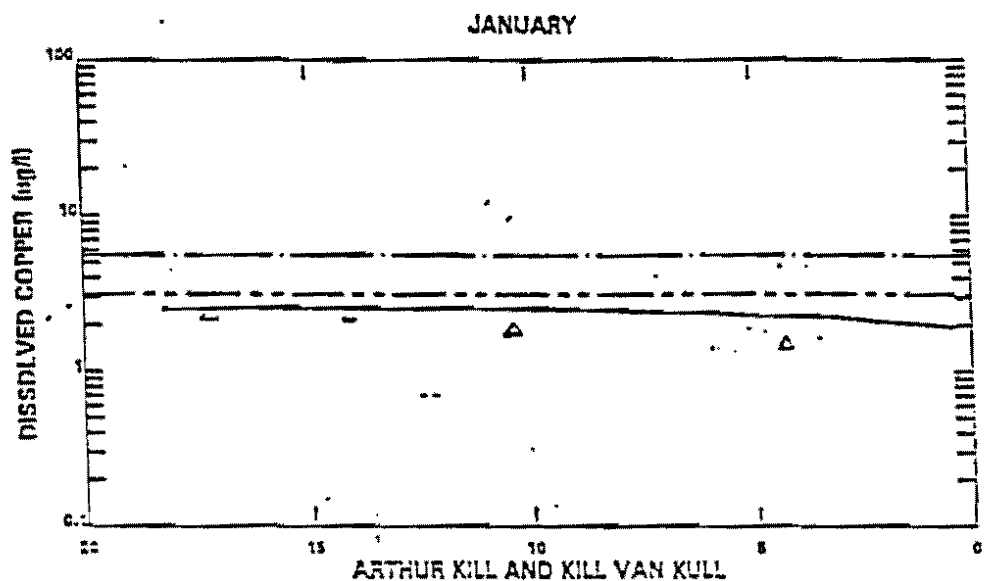
Arthur Kill and Kill Van Kull ambient dissolved copper data collected by EPA and the New Jersey Harbor Dischargers Group (GLEC, 1998)



original New York value of 152.9  $\mu\text{g/L}$  (total recoverable metal). The mean SW concentration is 17.5  $\mu\text{g/L}$ , as compared to the original New York value of 66.6  $\mu\text{g/L}$  (total recoverable metal). The municipal effluent data collected during this monitoring effort indicate significantly lower total recoverable copper concentrations as compared to data collected during the 1991 survey. These reductions may be the result of improved treatment efficiency and the implementation of industrial pretreatment programs at the New Jersey municipal treatment plants.

The water quality model employed for the 1991 TMDL calculations was revised for the Kills to include the updated CSO and SW data. This model is described under Part C, Section IV. The resulting modeling projections indicate that the copper criterion is not exceeded (refer to Figure 2). Figure 2 shows the dissolved copper concentrations projected by the model during January and October 1991 using the updated CSO and SW data. These projections include municipal plant effluent data collected during 1991. If the 1997 municipal plant effluent data were used, the resulting modeling projections would be even lower than what is shown in Figure 2.

In conclusion, both the ambient data analysis and modeling projections now indicate that the applicable copper criterion is not likely to be exceeded in the Kills. EPA has, therefore, concluded, that the TMDLs for copper in the Kills are not necessary because those waters are not impaired for copper and effluent limitations required of point sources under Section 301(b) of the CWA are stringent enough to implement water quality standards for copper applicable to such waters (i.e., the Kills are not water quality-limited for copper and no TMDL is required for copper). EPA is withdrawing the copper TMDLs in the Kills. The data analysis and modeling projections also support delisting the Kills from subsequent New Jersey 303(d) lists.



— MODEL CALIBRATION  
 - - - CRITERION  
 . . . LTA GOAL

Figure 2 January and October 1991 comparison of model results to long term average goal (GLEC, 1998)

## PART B

### EVALUATION OF NICKEL DATA IN THE HACKENSACK AND PASSAIC RIVERS AND NEWARK BAY

#### I. Section 303(d) Listing and Applicable Water Quality Standards

The Hackensack and Passaic Rivers and Newark Bay have been listed on New Jersey's Section 303(d) list for nickel (as well as other pollutants) since 1992. The use impairment is aquatic life. The saline portions of the Hackensack River are classified by the NJDEP as follows:

- The mainstem and saline tributaries from Oradell Dam to the confluence with Overpeck Creek is classified as Class SE-1. The designated uses for SE-1 waters are: shellfish harvesting; primary and secondary contact recreation; maintenance, migration and propagation of aquatic biota; and, any other reasonable uses.
- The mainstem and saline tributaries from Overpeck Creek to the Route 1 and 9 crossing is classified as Class SE-2. The designated uses for SE-2 waters are: secondary contact recreation; maintenance, migration and propagation of aquatic biota; migration of diadromous fish; maintenance of wildlife; and, any other reasonable uses.
- The mainstem from the Route 1 and 9 crossing to the confluence with Newark Bay is classified as Class SE-3. The designated uses for SE-3 waters are: secondary contact recreation; maintenance and migration of aquatic biota; migration of diadromous fish; maintenance of wildlife; and, any other reasonable uses.

The saline portions of the Passaic River are classified by NJDEP as follows:

- The main stem from Dundee Lake Dam to the confluence with Second River is classified as Class SE-2.
- The main stem from Second River to the confluence with Newark Bay is classified as Class SE-3.

All portions of Newark Bay are classified as SE-3.

The applicable nickel criteria for all saline portions of both the Hackensack and Passaic Rivers and Newark Bay are:

- 74  $\mu\text{g/L}$  (expressed as the dissolved form of the metal), which intended to protect aquatic life from acute effects; and,
- 8.2  $\mu\text{g/L}$  (expressed as the dissolved form of the metal), which intended to protect aquatic life from chronic effects.

The above nickel criteria were promulgated by EPA for the State of New Jersey on May 4, 1995 as part of the "Stay of Federal Water Quality Criteria for Metals; Water Quality Standards; Establishment of Numeric Criteria for Priority Pollutants; States' Compliance - Revision of Metals Criteria' Final Rules." The more stringent chronic criterion of  $8.2 \mu\text{g/L}$  has been applied for the TMDL assessment and development.

## II. Water Quality Monitoring in the Hackensack and Passaic River Systems and Newark Bay

Ambient water quality sampling for nickel was conducted over a ten-month period (May 1997-February 1998) for dissolved and total recoverable nickel concentrations and associated water parameters (e.g., total suspended solids, total organic/dissolved organic/particulate carbon, etc.) under wet and dry-weather conditions. A total of eight water sampling stations were included: three in the Hackensack River, three in the Passaic River, one in Newark Bay, and one at the southern mouth of Newark Bay. In addition, samples were also collected from the Oradell Dam on the Hackensack and the Dundee Dam on the Passaic River, representing the boundary locations for each River.

Pollutant sources were also monitored, including: seven CSOs and nine SW outfalls discharging to the Hackensack and Passaic Rivers, and effluent from three municipal sewage treatment plants (STPs) (Bergen County Utilities Authority, North Bergen STP, Secaucus STP) discharging to the Hackensack River. There are no STPs discharging directly to the saline segment of the Passaic River. Industrial dischargers, which were considered minor contributors, were not sampled during these monitoring events. [They were, however, considered during model calibration and TMDL development.] Samples were also collected from tributaries to the Hackensack River (Overpeck Creek, Berry's Creek, and Kingsland Creek), and to the Passaic River (Saddle River). A complete description of the sampling program can be found in the August 27, 1998 Report. Figure 3 shows the sampling stations in the study area.

## II. Evaluation of Ambient Nickel Data in the Hackensack and Passaic Rivers and Newark Bay

### A. Analysis of Ambient Data

Data collected during the monitoring surveys are summarized in the August 1998 report. Figure 4 shows the wet and dry-weather means of observed dissolved nickel concentrations at each station in the Hackensack and Passaic Rivers and Newark Bay. The graph indicates the following:

- the Hackensack River has the highest dissolved nickel concentration, while Newark Bay has the lowest concentration;
- there are no significant differences between the wet and dry-weather ambient water dissolved nickel concentrations; and
- ambient dissolved nickel concentrations approach the water quality criterion of  $8.2 \mu\text{g/L}$  in the Hackensack R.

- O Ambient Water Quality Stations
- X Acoustic Doppler Current Profiler (ADCP)

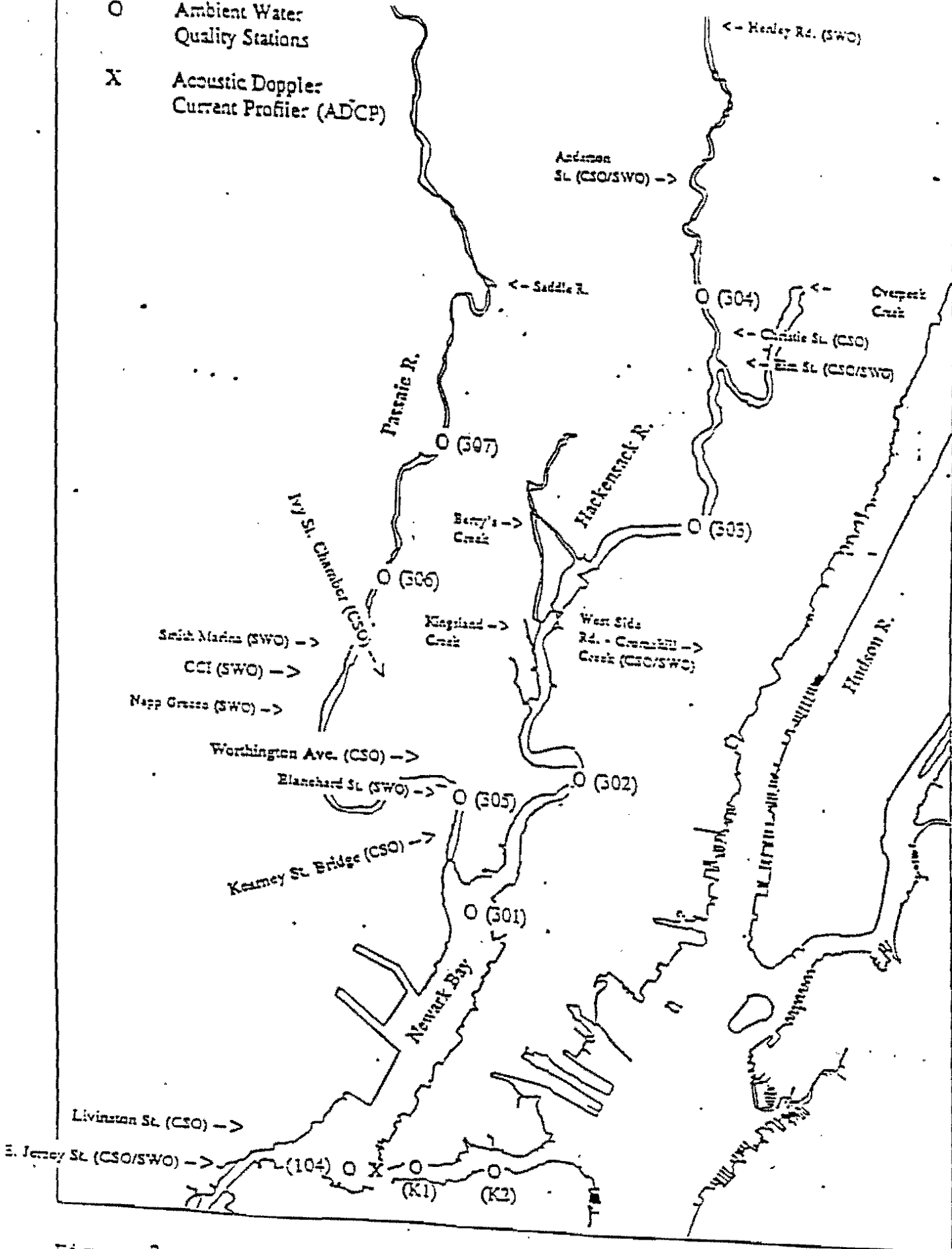
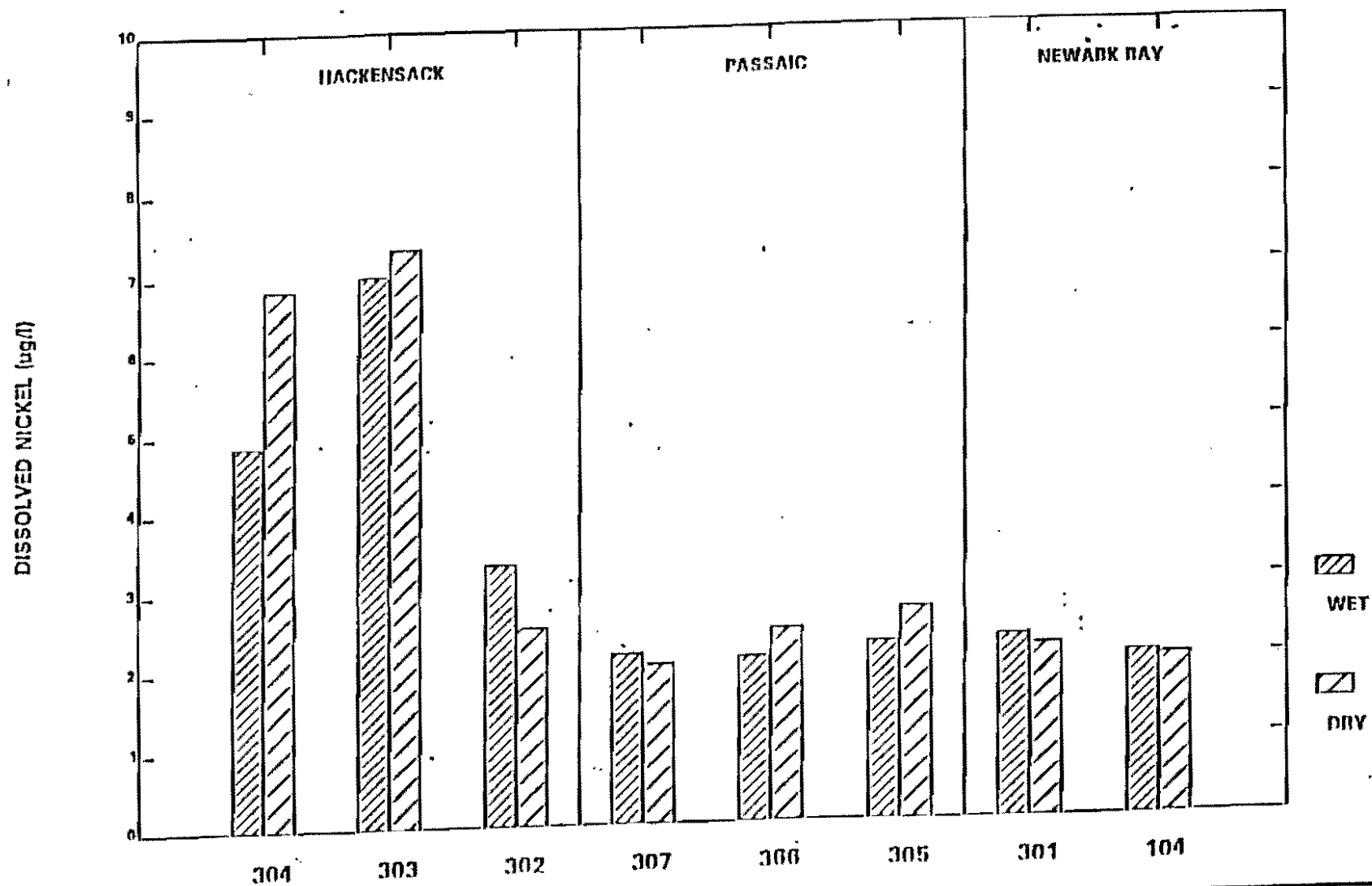


Figure 3 Location of sampling stations for the nickel-related sampling program (GLEC, 1998)

WET AND DRY OBSERVED MEANS BY STATION



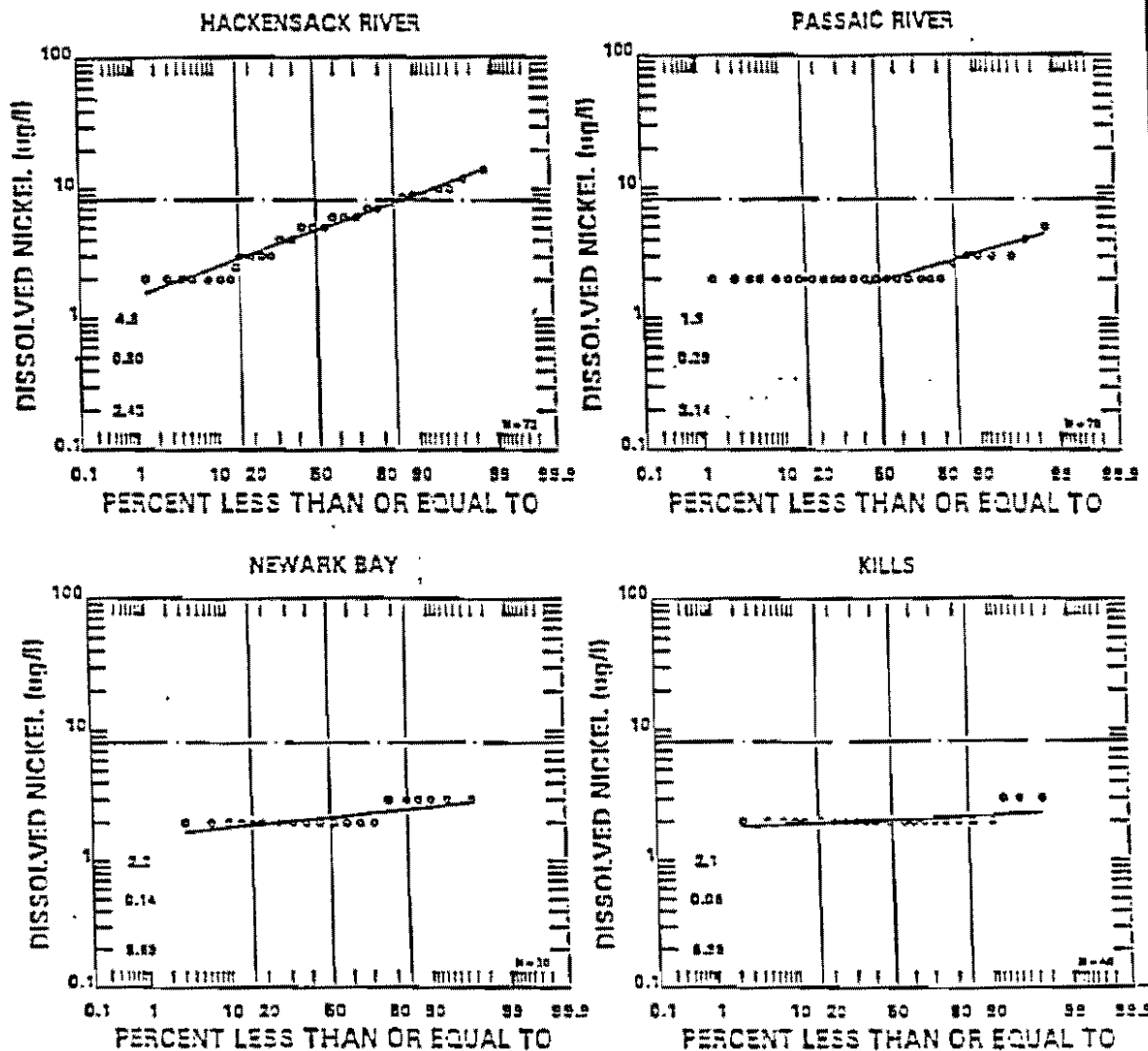
## B. Probability Distributions

Probability distributions were developed to determine compliance with the nickel ambient water quality criterion for nickel. The criterion, which is based on chronic toxicity, is expressed as a four-day average not to be exceeded more than once in a three year period. A methodology was developed to convert the criteria to a long-term average concentration (refer to August 1998 report). Based on this methodology, the criterion corresponds to compliance frequency of 99.63%. Probability distributions were developed, using data collected during both wet- and dry-weather monitoring surveys, for the Hackensack River, Passaic River and Newark Bay. Figure 5. Analysis of the distributions indicate the following:

- the nickel criterion is not projected to be exceeded in the Passaic River and Newark Bay; and
- the nickel criterion is projected to be exceeded in the Hackensack River.

Based on this analysis, EPA has concluded that the Hackensack River is water quality-limited for nickel and requires a TMDL. Probability distributions indicate that the Passaic River and Newark Bay are not water quality-limited for nickel. In addition, modeling projections under the critical low flow conditions do not indicate water quality criterion exceedances for the Passaic River and Newark Bay.

Based on the above analysis, EPA has concluded that the Passaic River and Newark Bay are not water quality-limited for nickel. EPA recommends that, in the next Section 303(d) listing cycle, the Passaic River and Newark Bay be delisted for nickel.



Regional Dissolved Nickel Distributions  
Hackensack and Passaic Rivers and Kills and Newark Bay



## PART C

### DEVELOPMENT OF TMDL/WLAs/LAs/ FOR NICKEL IN THE HACKENSACK RIVER

#### I. Section 303(d) Listing

The Hackensack River has been listed on New Jersey's 303(d) list since 1992 for several pollutants. This TMDL is being developed for nickel.

#### II. Applicable Water Quality Standards

The applicable water quality standards are described in Part B, Section I of this report. The applicable criterion for nickel is 8.2  $\mu\text{g/L}$ , expressed in the dissolved form.

#### III. Pollutant Sources and Loadings

The sources of nickel into the Hackensack River include municipal discharges, CSOs, storm water, tributaries and atmospheric deposition. A summary of the loadings is shown in Table 1.

Table 1. Summary of existing nickel loads to the Hackensack River (based on observed data collected during calibration period May '97- Feb. '98).

Source	Mean total recoverable nickel ( $\mu\text{g/L}$ )	Flow (mgd)	Load (lbs/day)
Bergen County Utilities Authority (BCUA) [NJ0020028]	17.8	76	11.3
North Bergen STP [NJ0034339]	4.6	7.2	0.28
Secaucus STP [NJ0025038]	1.5	3.2	0.04
CSOs	3.2	3.82	0.10
Storm Water	2.6	37.2	0.81
Boundary	2.0	22.2	0.37
Atmospheric	Not applicable	Not applicable	1.06

The BCUA is the largest contributor of nickel to the Hackensack River. It accounts for 81% of the total load.

#### IV. Water Quality Modeling

HydroQual Inc., the firm contracted by the NJHDG, used the same modeling framework for this effort as in the previous metals modeling conducted for the Harbor (*Development of Total Maximum Daily Loads and Waste Load Allocations for Toxic Metals in NY/NJ Harbor-Modeling Report*, HydroQual, Inc., 1995) The modeling framework, the Chemical Transport and Analysis Program (CTAP), is a steady-state mass balance model which includes the following processes:

- advective/dispersive transport;
- solid phase vertical transport;
- phase partitioning and kinetic reactions;
- transport across the water column/sediment interface;
- transport across the air/water interface; and
- point and nonpoint source loading.

The modeling framework consists of 91 water column segments plus and additional 91 sediment segments. The geographic scope of the model is the Hackensack River from the Oradell Dam, the Passaic River from the Dundee Dam, Newark Bay, Kill Van Kull and the Arthur Kill. A schematic of the model segmentation is shown in Figure 6.

The physical transport used in CTAP is based upon calibrating observed salinity measurements collected during the period May 1997 through February 1998. Freshwater flows were based on data collected at USGS gaging stations located above the heads of tide of the Hackensack and Passaic Rivers. Runoff from storm water and CSOs were calculated using the Rainfall Runoff Modeling Program developed by HydroQual.

Solid phase vertical transport within the model includes: water column settling, settling from the water column to the bed, resuspension from the bed to the water column, and burial of bed solids. Solid phase vertical transport rates were determined through calibration to suspended solids collected during the calibration period. The data indicate that there is little significant net deposition of solid phase matter from the water column to the bed. For the calibration period, the amount of material leaving the water column and entering the bed is equal to the amount of solid phase material that is resuspended from the bed to the water column.

In CTAP, the rates of adsorption and desorption relative to one another are defined by a partition coefficient. The partition coefficient is the metal-specific ratio of the solid phase metal to the dissolved phase metal. For a given partition coefficient and quantity of total recoverable metal, the amount of metal in the dissolved and particulate forms is dependent upon the suspended solids concentration. Based on data collected during this study, partition coefficients for nickel were calculated to be 41,000 for Newark Bay and the Passaic River and ranging from 11,600 to 22,500 for the Hackensack River.

Using this modeling framework, a good calibration was achieved for nickel in the Hackensack

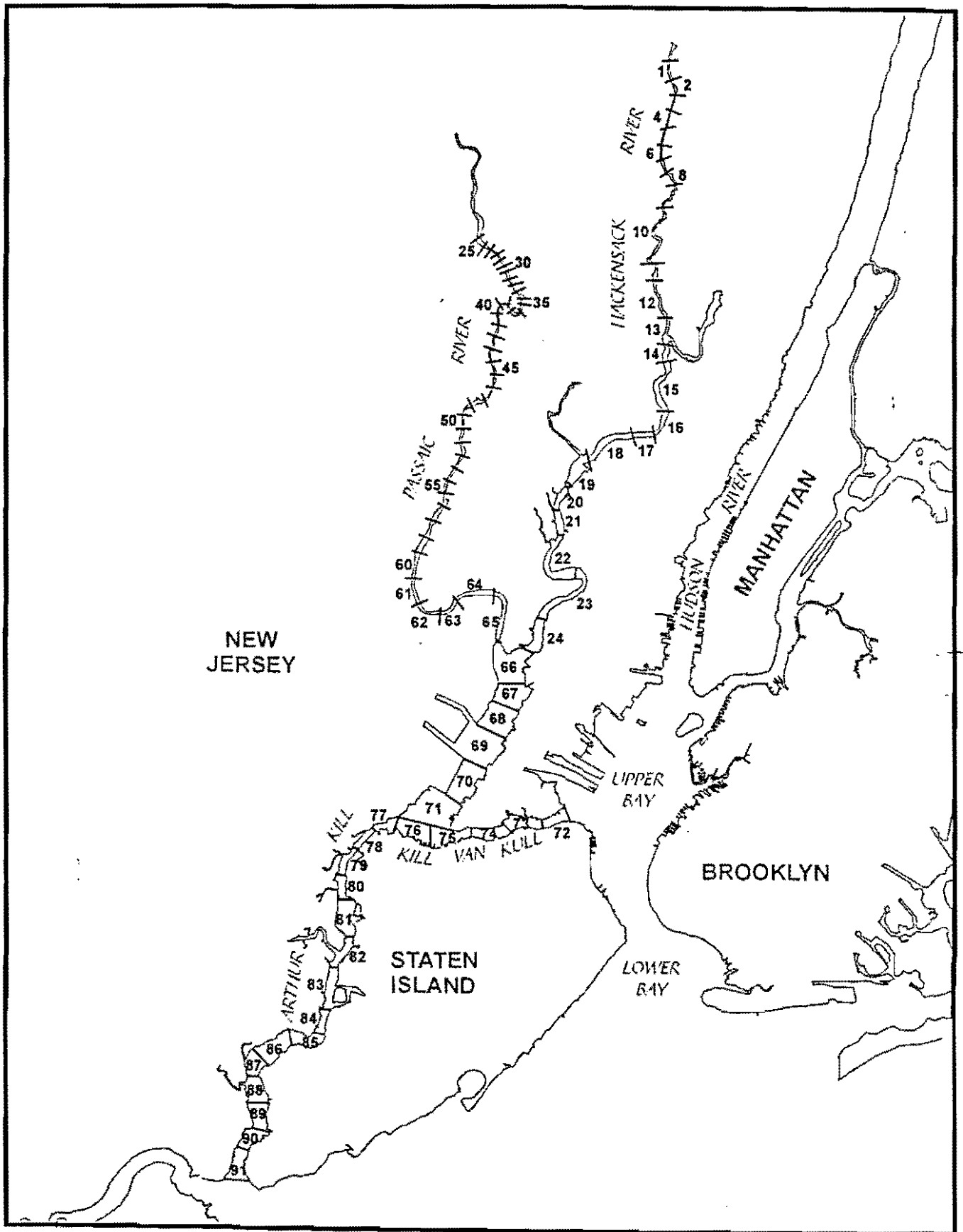


FIGURE 6  
SCHEMATIC OF MODEL SEGMENTATION  
(GLEC, 1998)

River (see Figure 7).

#### V. TMDL/WLAs/ LA for the Hackensack River

To facilitate the task of developing the TMDL, spreadsheets of load matrices which summarize calibrated model results were developed by HydroQual. The spreadsheets allow the user to specify loadings and predict the response in each of the water segments of the Hackensack and Passaic Rivers and Newark Bay. The total response is compared to the criterion to determine compliance. The criterion used in the spreadsheet is the long-term average from the probability distribution at an exceedance frequency of 99.63%.

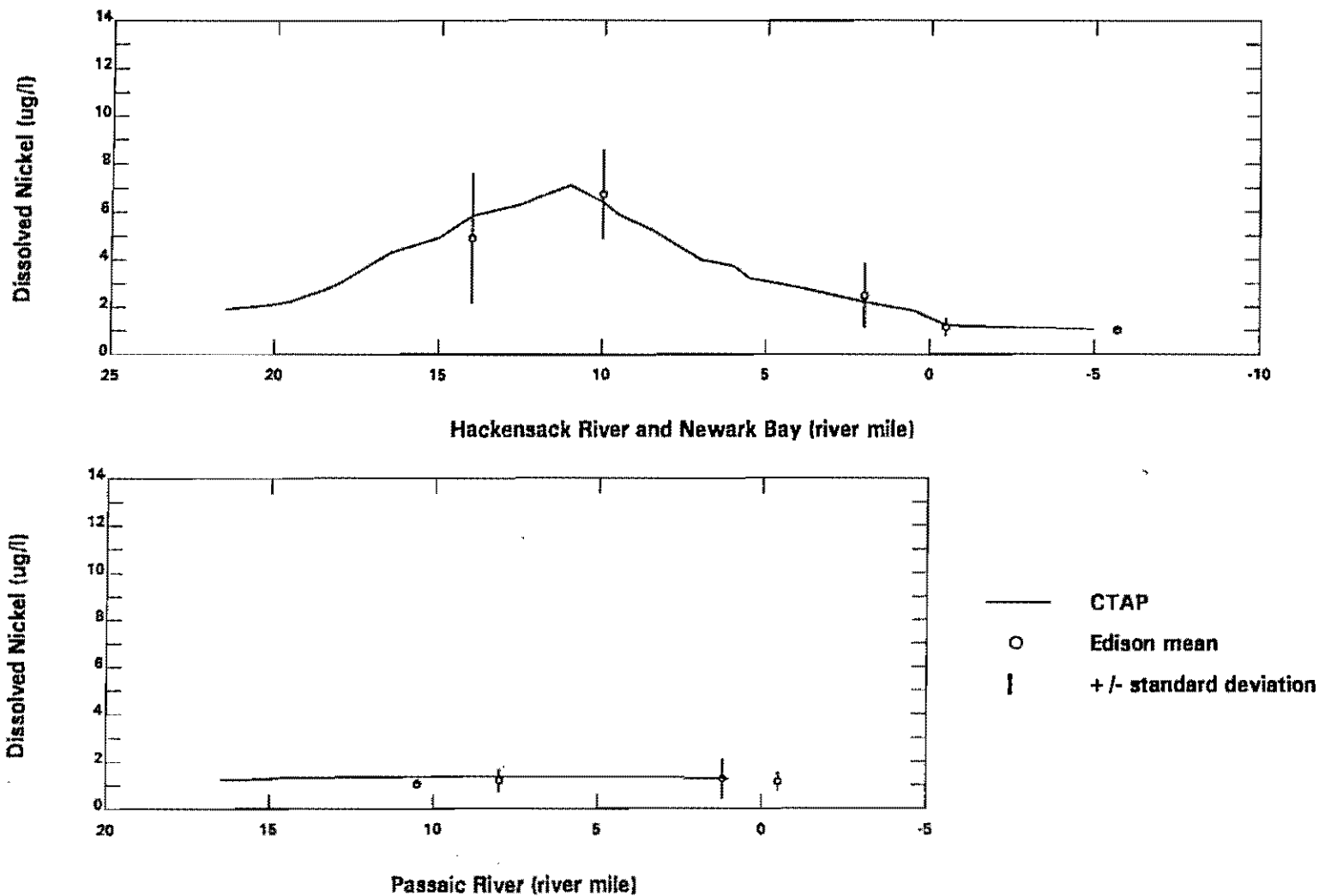
The October low flow transport condition was chosen as the critical condition for TMDL development in the Hackensack River. This is consistent with previous TMDL efforts for the Harbor. Data collected in the Hackensack River indicate that nickel concentrations are not significantly different during wet- vs. dry-weather conditions. The Hackensack River is an effluent-dominated stream. The ambient water quality in the Hackensack River is dominated by the BCUA discharge. While the BCUA flow is around 75 mgd, the Hackensack River dry-weather October 1991 flow is 0.6 mgd. The impact from the BCUA discharge on receiving water quality is expected to be more significant during dry-weather conditions.

#### Seasonal Variation

The Clean Water Act and accompanying regulations require that a TMDL be established with seasonal variations. CWA 303(d)(1)(C) and 40 CFR § 130.7(d)(2). As previously described, the concentration of nickel does not vary significantly between wet-weather and dry-weather conditions. Therefore, it is expected that using the October low flow condition will result in meeting criteria during all times of the year. By calibrating the model and developing the TMDL under the low flow condition, and by evaluating ambient nickel concentrations under wet and dry weather conditions, seasonal variation has been accounted for.

#### Margin of Safety

The Clean Water Act and EPA regulations require that a TMDL include a margin of safety to account for any lack of knowledge concerning the relationship between effluent limitations and water quality. CWA 303(d)(1)(C) and 40 CFR § 130.7 (c)(1). EPA guidance explains that the margin of safety may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the margin of safety. The previous TMDL established by EPA for metals in the Harbor utilized conservative assumptions for the margin of safety. Similarly, the margin of safety for this TMDL is incorporated into the TMDL through the following conservative assumptions: the use of low flow conditions as a critical condition for the TMDL analysis and, calculating the TMDL so the criterion is met at the 99.63% exceedance frequency.



COMPARISON OF CALCULATED AND MEASURED DISSOLVED NICKEL  
APRIL 1997 - FEBRUARY 1998

FIGURE 7 (GLEC, 1998)

As described previously, the Hackensack River is an effluent-dominated stream; the ambient concentration of nickel is driven by the BCUA nickel effluent concentration. Running the load matrices under various reduction scenarios indicates that reducing all the loads, except BCUA, has little effect on the ambient River nickel concentration. Compliance with the nickel criterion can only be achieved by significantly reducing the BCUA discharge. A reduction of around 80% (in the BCUA nickel concentration) is required to meet the criterion. The current flow from the BCUA facility is around 75 mgd. However, this facility has an ultimate design capacity of 109 mgd. There is some question as to what the appropriate permitted design flow should be. BCUA and NJDEP are in the process of determining this flow. The current mean effluent concentration of nickel at BCUA is 17.8  $\mu\text{g/L}$ , expressed as total recoverable metal. Therefore, in order to calculate the TMDL/WLA, the load matrices were run under both treatment plant flow scenarios. These calculations indicate that, at a BCUA flow of 75 mgd, the effluent nickel concentration must be reduced to approximately 3.6  $\mu\text{g/L}$  (total recoverable); while at a BCUA flow of 109 mgd, the effluent concentration must be reduced to 3.7  $\mu\text{g/L}$  (total recoverable). There is little difference between the required effluent nickel concentration at 75 mgd and that at 109 mgd. Because there is little or no dilution available in the Hackensack River, the concentration of nickel from the BCUA discharge directly impacts the receiving water nickel concentration. The effluent nickel concentration dictates the ambient nickel concentration, not the mass load of nickel. In order to ensure compliance with the nickel criterion, the WLA must specify a concentration-based limit. Because the appropriate design flow has not been determined for BCUA, the TMDL and WLA will be based on the more stringent nickel effluent concentration of 3.6  $\mu\text{g/L}$  (total recoverable), which is required to meet the nickel criterion. When the WLA is translated to a permit limit, the limit must, at a minimum, be expressed as a concentration-based limit, and if necessary, a mass-based limit. The concentration water quality-based limit will ensure compliance with the ambient nickel criterion. This is consistent with EPA's regulations under 40 CFR § 122.44(d)(1)(vii) which requires that water quality-based limits must be consistent with applicable water quality standards and any assumptions and requirements of the waste load allocations that have been established by the State (or EPA) under 40 CFR § 130.7.

EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to existing and future point sources. 40 CFR § 130.2(g). In addition, the regulations require that a TMDL include LAs, which identify the portion of the loading capacity allocated to existing and future nonpoint sources and to natural background. 40 CFR § 130.2(h). Load allocations may range from reasonably accurate estimates to gross allotments. 40 CFR § 130.2(g).

The TMDL for nickel is shown in Table 2. For purposes of calculating the TMDL, the WLA for BCUA is expressed in lbs/day. For the other sources, the WLA is also expressed in lbs/day, however, there is no water quality-based concentration that must be met. All WLAs are calculated as long-term averages in order to meet the chronic criterion.

Table 2. TMDL/WLAs/LAs for nickel in the Hackensack River.

Source	Existing Load (lbs/day)	WLA/LA (lbs/day)
BCUA [NJ0020028]	11.3	2.2 <sup>1</sup>
North Bergen STP [NJ0034339]	0.28	0.38 <sup>2</sup>
Secaucus STP [NJ0025038]	0.04	0.06 <sup>3</sup>
CSOs	0.10	0.10
Storm Water	0.81	0.81
$\Sigma$ WLAs		3.55
Atmospheric	1.06	1.06
Boundary(Background)	0.37	0.37
<b>TMDL</b>		<b>4.98</b>

<sup>1</sup>The WLA of 2.2 lbs/day is established at an effluent concentration of 3.6  $\mu\text{g/L}$  (total recoverable) and flow of 75 mgd; if the effluent flow is 109 mgd, the WLA is 3.3 lbs/day with an effluent concentration of 3.6  $\mu\text{g/L}$ .

<sup>2</sup>Based on design flow of 10 mgd and mean effluent concentration of 4.6  $\mu\text{g/L}$  (total recoverable).

<sup>3</sup>Based on design flow of 5.12 mgd and mean effluent concentration of 1.5  $\mu\text{g/L}$  (total recoverable).

The TMDL for nickel in the Hackensack River can be summarized as follows:

$$\begin{aligned} \text{TMDL} &= \Sigma \text{WLAs} + \text{LA} + \text{Background} \\ 4.98 \text{ lbs/day} &= 3.55 \text{ lbs/day} + 1.06 \text{ lbs/day} + 0.37 \text{ lbs/day} \end{aligned}$$

The WLAs for North Bergen and Secaucus STPs are based on existing mean effluent concentrations and their design flows of 10 and 5.12 mgd, respectively. The WLAs for CSOs and SW are based on current loads. The LA of 1.06 lbs/day is based on atmospheric deposition of nickel to the Hackensack River. The background load of 0.37 lbs/day is calculated at the boundary condition at the Oradell Dam and represents the load of nickel coming into the River upstream of the Dam.

## VI. Implementation Plan

Current EPA regulations do not require EPA to include an implementation plan with TMDLs it establishes. Nevertheless, EPA has chosen to include an implementation plan with this TMDL to provide New Jersey with guidance as to how it might ensure that the TMDL achieves the applicable water quality standards. NJDEP may choose to implement this plan, or may implement the TMDL differently, as long as the overall provisions of the TMDL are met. EPA understands that NJDEP will implement portions of the TMDL through its New Jersey Pollutant Discharge Elimination System (NJPDES) permitting program.

### Bergen County Utilities Authority (BCUA)

The plan to achieve the required reduction at the BCUA plant (NJPDES permit number NJ0020028) should be a two phase process. Phase 1, which may be implemented through the NJPDES permit or through an alternative enforceable agreement, should include the following provisions:

- Source identification program for nickel;
- Evaluation of nickel quantitation issues such as test method sensitivity and establishment of appropriate quantitation levels for the BCUA effluent and within the BCUA collection system, so that sufficient information is available to evaluate compliance with the wasteload allocation/permit limit which could be near or below the detection limit and to assist in the source identification program;
- Nickel reduction feasibility study which evaluates source reduction and treatment alternatives necessary to meet the proposed nickel limit; and
- Outfall relocation study, which identifies options for discharge relocation either downstream in the Hackensack River or elsewhere, if nickel reduction at the existing location is not feasible.

The studies/reports under Phase 1 should include a recommended alternative which meets the goals of the TMDL and should be completed by March 2001, so that the chosen alternative could be incorporated in the re-issued NJPDES permit. In summary, Phase 1 is a planning effort which should result in an alternative recommended by BCUA which either meets the WLA included in this TMDL or which identifies an alternate discharge location.

Phase 2 of the implementation plan for BCUA involves reissuance or modification of the NJPDES permit. The permit must be consistent with this TMDL and should include implementation of a plan chosen by NJDEP. It is anticipated that the permit would include a compliance schedule outlining interim steps necessary to achieve the required nickel reductions or to relocate the outfall. If the existing discharge location is maintained, the permit should include a numeric nickel limitation consistent with the wasteload allocation. This limitation should take effect within the term of the permit. If outfall relocation is planned, a project



completion date within the term of the permit should be included.

The existing BCUA permit expires in July of 2001. Timely reissuance of the permit would result in a new permit which expires in July of 2006. Therefore, it is expected that any compliance schedule to implement the chosen alternative would not extend beyond July 2006.

#### North Bergen Municipal Utilities Authority and Town of Secaucus

In order to ensure that nickel loads from the North Bergen "Central" (NJ0034339) and Secaucus (NJ0025038) plants do not increase, these two permits should include "existing effluent quality" (EEQ) limits.

Concurrent with the establishment of the EEQ limits, NJDEP should consider whether the NJPDES permits should require the permittees to evaluate the need for local limits for nickel. Development and implementation of local limits would ensure that industrial sources do not cause or contribute to an exceedance of the EEQ limits. In addition to controlling industrial sources, the permittees may choose to impose nickel control requirements for commercial sources (e.g., automotive facilities, machine shops) if such controls are deemed appropriate. As an alternative, a pollution prevention audit program could be implemented as a voluntary program outside of the NJPDES program.

The North Bergen permit expires in July of 2001, and the Secaucus permit expires in October of 2003. EPA believes that it would be reasonable for NJDEP to incorporate the appropriate terms into these two permits by the end of 2001.

#### Combined Sewer Overflows

Regulation of CSOs in New Jersey is achieved through individual NJPDES permits issued to wastewater treatment plants and through the NJPDES general permit for CSO collection system operators. These permits are the means to implement the CSO wasteload allocation included in this TMDL. Based on a preliminary analysis, EPA has identified four CSO collection system operators which discharge to the Hackensack River system (City of Hackensack, Village of Ridgefield Park, North Bergen Township, and Jersey City Sewerage Authority). There are three wastewater treatment plants which serve these combined sewer areas (Bergen County Utilities Authority, North Bergen, and Passaic Valley Sewerage Commissioners).

NJDEP has considerable flexibility to establish appropriate permit conditions in its NJPDES permits to control nickel discharges from CSOs to the Hackensack River system. NJDEP may choose to impose numeric limitations on CSOs, although EPA does not recommend this approach in this circumstance, since the WLA for CSOs is an aggregate number rather than outfall-specific. In the absence of numeric limitations, NJDEP should impose conditions in NJPDES permits to ensure that special emphasis is placed on minimizing CSO discharges.

Two related techniques which should be evaluated for the CSO dischargers to the Hackensack River are the maximization of flow to the sewage treatment plant and the maximization of

storage capacity in the combined system. NJDEP is already implementing these techniques as part of its base program activities. However, EPA recommends that NJDEP evaluate available information developed by CSO dischargers and require implementation of any additional, feasible actions which could mitigate CSO discharges to the Hackensack River. In other words, EPA suggests that NJDEP and the CSO dischargers evaluate the status of ongoing CSO mitigation efforts and seek opportunities to enhance the effectiveness of pollution control efforts in the Hackensack River watershed.

### Storm Water

Implementation of the storm water wasteload allocation should be done through the NJPDES storm water permitting program. NJDEP has considerable flexibility in identifying the municipal and industrial storm water dischargers which are likely contributors of nickel to the Hackensack River system, and in developing storm water permit conditions to control the discharges. NJDEP may choose to impose numeric permit limitations for nickel, but EPA does not recommend this approach, since the storm water WLA is an aggregate number rather than outfall-specific. In addition, as explained in EPA's August 1, 1996 Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, the Agency recommends Best Management Practices (BMPs) in first round storm water permits, and expanded or better-tailored BMPs in subsequent permits, to provide for the attainment of water quality standards.

The most common sources of nickel in storm water appear to be associated with automotive use. Nickel contamination of runoff results from deposition of tail-pipe exhaust, leaks and dumping of coolant and oil. BMPs that target roads and parking lots would likely be the most effective way to control nickel pollution in storm water runoff. Some BMPs associated with roadways and parking lots include vegetative swales, protection of storm drains, and porous pavement.

Another source of nickel may be the marinas located on the Hackensack River. Nickel is a component of fuel, and also may be used in metal hulls, boat parts and paint. Storm water discharges from marinas that practice vehicle maintenance or equipment washing are covered under the Phase I storm water program. Other marinas are addressed under guidance documents (but not regulations) related to the Coastal Zone Act Reauthorization Amendments (CZARA).

Development of a schedule for storm water permitting actions should take into account the expected issuance of EPA's Phase II final storm water rule in October 1999. This rule is expected to initiate a new round of permitting activities for municipalities in urbanized areas. EPA believes that it would be prudent for NJDEP to integrate its Phase II base program actions with this special effort to implement more specific, targeted controls on storm water discharges to the Hackensack River system. Based on current projections, the new round of permits should be in place by November 2002.

## REFERENCES

HydroQual, Inc. 1994. Development of Total Maximum Daily Loads and Wasteload Allocations (TMDLs/WLAs) Procedure for Toxic Metals in NY-NJ Harbor. Modeling Report. U.S. Environmental Protection Agency, Region 2, NY. Report dated February 1994.

U.S. Environmental Protection Agency, Region 2. 1994. Total Maximum Daily Loads (TMDLs) for Copper, Mercury, Nickel and Lead in NY-NJ Harbor. Report dated July 26, 1994.

Great Lakes Environmental Center. 1996. Summary of Phase I Metals Sampling and Analysis Program for the New Jersey Component of the New York/New Jersey Harbor Estuary Program. Report dated March 5, 1996 with supplement "Revisions to the Metals Report" dated March 26, 1996.

U.S. Environmental Protection Agency. 1996. Memorandum from Robert Perciasepe, Assistant Administrator, "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits. Memorandum dated August 1, 1996.

U.S. Environmental Protection Agency. 1999. Letter from Jeanne Fox, Regional Administrator to Robert Shinn, Commissioner establishing the Memorandum of Agreement for the schedule for TMDL development. Letter with attachments dated May 1, 1999.

Great Lakes Environmental Center. 1998. Monitoring and Modeling of Nickel in the Hackensack and Passaic Rivers and Newark Bay and Monitoring and Data Analysis for Copper in the Arthur Kill and Kill Van Kull. Report dated August 27, 1998.

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EPA'S RESPONSE TO COMMENTS RECEIVED ON ITS  
"PROPOSED WITHDRAWAL OF TOTAL MAXIMUM  
DAILY LOADS (TMDLS) FOR COPPER IN THE  
ARTHUR KILL AND THE KILL VAN KULL  
AND  
ESTABLISHMENT OF A TMDL FOR NICKEL  
IN THE HACKENSACK RIVER"  
(As Public Noticed in the October 28, 1999  
Federal Register, 64 FR 58058)

December 22, 1999

#### List of Commenters:

1. Jerome F. Sheehan, Executive Director, Bergen County Utilities Authority (BCUA)
2. Eastern Environmental Law Center at Widener University & the American Littoral Society (Widener)
3. Robert P. Douglas, Environmental Policy Manager, PSE&G (PSE&G)
4. John F. Zajac, Manager - Safety and Environmental Engineering, Howmedica Osteonics Corporation
5. Richard E. Draper, Chief - Estuary Watershed Management Section, New York State Department of Environmental Conservation (NYS DEC)
6. Brian Bigler, Executive Director, Secaucus Municipal Utilities Authority (SMUA)
7. Robert C. Fischer, Executive Director, North Bergen Municipal Utilities Authority (NBMUA)
8. Jacky Beshar, Vice President of Operations, Groov-Pin Corp.
9. Nicholas J. Valente, Supervisor - Environmental Services Unit, NJ Transit (NJT)
10. Daniel L. Kent, Kennesaw, GA

#### I. COMMENTS ON PUBLIC PARTICIPATION

Comment # 1: EPA received seven comments (#s 1, 3, 4, 6, 7, 8, & 9) requesting an extension of the 30-day comment period noticed in 64 FR 58058.

EPA Response: On November 24, 1999, EPA denied the request to extend the comment period. Since 1995, EPA, the New Jersey Department of Environmental Protection (NJDEP), the New Jersey Harbor Dischargers Group (NJHDG), which include many of the commenters requesting the extension, and the NJHDG's consultant, the Great Lakes Environmental Center (GLEC), have been working together to collect monitoring data, develop a water quality model and TMDLs, as necessary, for certain waters of the New York/New Jersey Harbor, including the Hackensack River. In August 1998, the GLEC, on behalf of the NJHDG, submitted a final report entitled "Monitoring and Modeling of Nickel in the Hackensack and Passaic Rivers and Newark Bay and Monitoring and Data Analysis for Copper in the Arthur Kill and Kill Van Kull" to EPA. EPA used the findings in this NJHDG report to develop the nickel TMDL for the Hackensack River. In November 1998, EPA met with BCUA, GLEC and other dischargers to discuss the actions EPA would likely take regarding certain waters in the Harbor. At that time, EPA informed BCUA that any TMDL for nickel in the Hackensack River would require significant reductions of nickel from the BCUA discharge. In June 1999, EPA, through the GLEC, shared a pre-public notice draft of the Hackensack Nickel TMDL with the NJHDG. On October 28, 1999, EPA issued a 30-day public notice, in the Federal Register (64 FR 58058), of its intent to establish a TMDL for nickel in the Hackensack River. Therefore, EPA believes that the affected parties had adequate notice and time to comment on EPA's proposal.

Comment #2: EPA did not develop the Hackensack Nickel TMDL in accordance with the New Jersey Department of Environmental Protection's (NJDEP) TMDL approach, as outlined in NJDEP's document titled "*Draft Statewide Watershed Management Framework for the State of New Jersey*, January 1997. The commenter states that EPA did not provide the level of public outreach and stakeholder involvement required by this document and by not extending the comment period all users and stakeholders did not have sufficient time to review the TMDL.(#1)

EPA Response: NJDEP has implemented a stakeholder process which provides early and significant public participation in the entire TMDL process. EPA fully supports NJDEP's approach. However, EPA has provided extensive public participation in the development of both the Phase I and Phase II NY/NJ Harbor Metal TMDLs. Under the auspices of the NY-NJ Harbor Estuary Program, EPA has, since 1989, been working with the States of New Jersey and New York, citizen groups and both New York and New Jersey dischargers to develop TMDLs for these waters. Also, see previous response.

## II. COMMENTS ON EPA'S PROPOSAL TO WITHDRAW THE TMDL FOR COPPER IN THE ARTHUR KILL AND KILL VAN KULL

Comment #3: Two commenters support the proposed actions noticed in 64 FR 58058 to withdraw the TMDLs for copper in the waters of Arthur Kill and Kill Van Kull. (#s 5 &10)

EPA Response: No response required.

Comment #4: The proposed withdrawal is premature and the amount of the data the action is based on is insufficient. (#2)

EPA Response: EPA disagrees with this comment. The commenter had concluded that this action is based on "six months of water quality data collected from two sampling stations, coupled with data collected from a 1991 sampling event". As described on page 4 of EPA's document "Proposed Withdrawal of Total Maximum Daily Loads (TMDLs) for Copper in the Arthur Kill and the Kill Van Kull and Proposed Establishment of a TMDL for Nickel in the Hackensack River" (September 1999), the monitoring program included the collection of copper data in ambient water three times under wet weather and six times under dry-weather at two sampling stations each in the Arthur Kill and Kill Van Kull. These data do not indicate exceedances of the copper criterion. In addition, modeling projections, conducted under worst case conditions, indicate that the copper criterion will not be exceeded in either the Arthur Kill or the Kill Van Kull. EPA believes that this is sufficient data to support the withdrawal of the copper TMDL in the Arthur Kill and Kill Van Kull.

### III. COMMENTS ON EPA's PROPOSAL TO ESTABLISH A TMDL FOR NICKEL IN THE HACKENSACK RIVER

#### A. General

Comment # 5: Two commenters support the proposed actions noticed in 64 FR 58058 to establish a TMDL for nickel in the Hackensack River. (#s 2 & 10)

EPA Response: No response required.

#### B. Water Quality Criteria:

Comment # 6: Instantaneous measurements of nickel concentrations are more closely associated with addressing acute toxicity, and the water quality standard for dissolved nickel is based on a chronic protection criteria.(#3)

EPA Response: The duration and frequency with which the water criterion is expressed (i.e., the criterion must be complied with 99.63% of the time). EPA and New Jersey water quality criteria for aquatic life for all parameters establish a magnitude, frequency and duration. Organisms in the receiving water do not experience constant steady exposure but rather experience fluctuating exposures, including periods of high concentration, which may have adverse effects. Thus water quality standards indicate a time period over which the exposure is to be averaged, as well as the maximum concentration, thereby limiting the duration of exposure to elevated concentrations. EPA and New Jersey aquatic life water quality criteria for chronic effects (the Criteria Continuous Concentration) establish an averaging period of 4 days. That is, the 4-day average exposure should not exceed the CCC. To predict or ascertain the attainment of criteria it is necessary to specify the allowable frequency for exceeding the criteria. This is because it is statistically impossible to project that criteria will never be exceeded. EPA and New Jersey aquatic life criteria for chronic effects establish a frequency of exceedance of once in three years. Thus, the magnitude for chronic effects may be exceeded 4 days in three years, i.e., the magnitude for chronic criteria must be complied with 99.63% of the time.

In order to best measure compliance with the chronic nickel criterion, ambient nickel samples would need to be taken on a daily-basis over a three year period. to determine a running four-day average. Given the fact that such monitoring is both costly and infeasible, therefore, instantaneous measurements are typically used as the basis for determining compliance with both acute and chronic aquatic life water quality criteria, in the water column. The analysis used by the New Jersey Harbor Discharger Group's consultant, HydroQual, Inc., translates the instantaneous data into the appropriate duration and frequency by using a long-term average at the 99.63% exceedance frequency. Target long-term average concentrations were developed as probability distributions of the ambient nickel



data from the Hackensack River. This long-term average was adjusted downward until the chronic compliance frequency of 99.63 was met. A more detailed explanation of this approach may be found in the HydroQual, Inc., September 1995 Modeling-Report titled *"Development of Total Maximum Daily Loads and Wasteload Allocations for Toxic Metals in NY/NJ Harbor"* prepared for EPA and in the Great Lakes Environmental Center's, March 1995 Report titled *"Summary of the Phase I metal sampling and analysis program for the New Jersey Component of the New York/New Jersey Harbor Estuary Program"* prepared for the New Jersey Harbor Dischargers Group.

For instantaneous effluent measurements, the "standards to permits" process does account for instantaneous monitoring measurements taken at a specified compliance monitoring frequency in determining permit limits that are protective of a chronic standard. See EPA's Technical Support Document (TSD) Section 5.4.1 "EPA Recommendations for Permitting for Aquatic Life Protection" for a complete discussion of this topic.

Comment # 7: Two commenters are in disagreement with the Long Term Average (LTA) concentration calculations presented in the proposed nickel TMDL since they are based on compliance with the water quality standard at a frequency of 99.63%, which is higher than typical permit calculations (i.e. 99.0% frequency) and are overly protective.. (#1, 3 & 7)

EPA Response: As explained in the previous response, the 99.63% exceedance frequency is based on a 4-day average not to be exceeded more than once in a three year period. The conversion of the Long-Term Average into a permit limit using a probability basis of 99% are not inconsistent nor overly protective..

The "standards to permits" process includes the conversion of the long-term average criterion to a Waste Load Allocation (WLA). The WLA is used to develop a Water Quality-Based Effluent Limitation that is protective of the chronic nickel criteria. The permit limit derivation procedure accounts for effluent variability, considers available receiving water dilution, accounts for compliance monitoring sampling frequency, protects against acute and chronic impacts, and is protective of the WLA and the water quality standard. For calculation of a Maximum Daily Limit from a WLA based on a chronic criterion, EPA guidance and NJDEP regulations specify the 0.01 probability basis (99<sup>th</sup> percentile level). EPA and NJDEP consider the WLA to be an effluent quality that should not be exceeded. Thus, the permit limit will assure that the WLA will be met at the 99% confidence level.

B. Modeling Analysis and TMDL Development

Comment # 8: One commenter objected to EPA's assumption of "worse case conditions" which include low flow in the river and significant flows from CSOs and storm water. The commenter considers these conditions "mutually exclusive". (# 7)

EPA Response: As per 40 CFR 130.7 (c)(1), TMDLs "shall take into account critical conditions for stream flow, loading, and water quality parameters". At low flow conditions, BCUA's flow is about 75 mgd while the base flow to the Hackensack River is about 0.6 mgd. Therefore, at low flow conditions, the Hackensack River is an effluent-dominated river. For calculating the TMDL for nickel, low flow was determined to be the critical condition. EPA chose to use the October low flow transport field as the critical condition for "stream flow". This is consistent with previous TMDL efforts for the Harbor. However, rain events sufficient enough to cause CSOs and storm water discharges may occur even during low flow condition. For the calibration period, based on average conditions observed during the monitoring period (April 1997-February 1998) an average rainfall intensity of 0.116 inches/day was used. In the critical condition low flow scenario an average rainfall intensity of 0.071 inches/day was used.

Comment # 9: A single model "calibration" using limited sets of measurements during dry and wet weather conditions is questionable; and that the model's steady-state assumptions, while reasonable, may not be valid during wet weather periods. (#3)

EPA Response: The water quality model used for developing the TMDL has been calibrated against salinity and total and dissolved nickel concentrations measured in the Hackensack River. These calibrations, which can be found in Appendix A of the study entitled "Monitoring and Modeling of Nickel in the Hackensack and Passaic Rivers and Newark Bay and Monitoring and data Analysis for Copper in the Arthur Kill and Kill Van Kull" (Great Lakes Environmental Center, 1998), verify the model's ability to predict nickel concentrations in the Hackensack River. In addition, the same modeling framework also produced a reasonable model calibration in the Passaic River. EPA's determination that wet weather impacts are not significant in the Hackensack River are based on wet- and dry-weather data collected during the April 1997 to February 1998 sampling program. These data are summarized in Figure 4 of EPA's September 1999 TMDL document. These data indicate that wet-weather impacts are not significant and, therefore, the steady-state assumption is valid.

Comment # 10: The hydrodynamics for the Hackensack River and the partitioning of nickel are based on numerous simplified assumptions and that a sensitivity analysis of the model's predictions related to assumptions is warranted since the model has been calibrated using a relatively small data set and has not been verified by using an independent data set. (#3)

EPA Response: This model has been previously calibrated and verified for waters of the NY-NJ Harbor (see Development of Total Maximum Daily Loads and Wasteload Allocations for Toxic Metals in NY/NJ Harbor, HydroQual, Inc., September 1995). In this recent TMDL effort, the model was again calibrated for nickel (total and dissolved) and salinity in the Hackensack and Passaic Rivers. The modeling framework used in this TMDL is the Chemical Transport and Analysis Program (CTAP) developed by HydroQual, Inc. in 1982 and revised in 1991. The components of the model are described on page 15 of EPA's September 1999 TMDL document. The physical transport used in CTAP is based upon model calibration of observed salinity measurements collected during the calibration period (April 1997 to February 1998). The model was also calibrated to suspended solids data for determining solid phase vertical transport rates (water column settling, settling from the water column to the bed, resuspension from the bed to the water column, and burial of bed solids). Sediment and water column partition coefficients were calculated based on solids and dissolved and total recoverable nickel concentrations collected in the Hackensack River. EPA believes that the model has been adequately calibrated for use in determining the TMDL. (Also, see previous response).

C. Waste Load Allocations (WLAs) and Load Allocations (LAs)

Comment # 11: The conservative approach used by EPA to develop the TMDL overstates the impact of the North Bergen discharge. The commenter disagrees with the imposition of existing effluent quality limits in its NJPDES permit. (#7)

EPA Response: North Bergen and Secaucus STPs were found to be minor contributors of nickel to the Hackensack River. North Bergen and Secaucus STPs were given WLAs based on existing effluent concentration and design flow. The TMDL regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to existing and future point sources (40 CFR § 130.2(g)). The North Bergen and Secaucus discharges contribute nickel to the receiving water and therefore requires WLAs. These WLAs are based on existing effluent concentrations and the facilities design flows. This allows each facility to discharge up to its design flow as long as the nickel effluent concentration does not exceed the WLA requirement.

Comment # 12: The WLAs for North Bergen and Secaucus should be established at the existing discharge levels. Footnotes #2 and 3 of Table 2 should indicate the rationale of increasing the discharge limit of nickel from existing conditions. (#2)

EPA Response: The commenter is referred to page 19 EPA's September 1999 TMDL document. As described on above, the Hackensack River is dominated by the BCUA discharge. It also states that the ambient nickel concentration in the Hackensack River is driven by the effluent nickel concentration, rather than the mass load of nickel. The discharge of nickel to the Hackensack River from the

Secaucus and North Bergen STPs is negligible. Therefore, as explained on page 20 of EPA's TMDL document, the WLAs included in the TMDL for the Secaucus and North Bergen STPs are set at design flow and existing effluent concentrations. Increased flows and loading from these facilities will not impact the receiving water nickel concentration.

Comment # 13: One commenter objects to a waste load allocation of 3.6 ppb for BCUA as compared to the storm water and CSO load allocation of 182 ppb. (#1)

EPA Response: EPA does not understand the basis for the commenter's statement that the load allocations for CSO and storm water discharges are based on a concentration of a 182 ppb of nickel. Table 1 on page 14 of EPA's September 1999 TMDL document provides the concentration of nickel in CSO and storm water discharges which were used to calculate the WLAs. The existing nickel concentrations used to calculate the WLAs are 3.2 ppb for CSOs and 2.6 ppb for storm water.

Comment # 14: One commenter stated that there is a lack of measurement for atmospheric deposition during the 1997 monitoring surveys in the Hackensack River. The commenter disagrees with the use of historical atmospheric data and believes using such estimates would be erroneous if nickel concentrations were actually lower than measured. The commenter cites HydroQual's description of historical atmospheric data to be poor and references the following quote in the 1997 monitoring report: "the accurate measurement of trace metals in ambient waters requires the utilization of state-of-the-art clean techniques. Historical measurements of trace metals are probably not accurate, and can differ erratically from modern day measurements by at least an order of magnitude." (#1)

EPA Response: EPA disagrees with this comment. While EPA would prefer to have current data from all loading sources, atmospheric loading can be implicitly derived through a mass balance. Based on knowledge of other point and nonpoint sources of loadings, background levels, and ambient conditions, we can determine if the loading of dissolved nickel from atmospheric deposition represents a significant or minor load of nickel to the Hackensack River. In this case all indications are that atmospheric deposition at an estimated 1.06 lbs/day is not significant when compared to BCUA's load of 11.3 lbs/day.

Comment # 15: One commenter states they were unable to obtain the atmospheric deposition reports referenced in HydroQual's report in time for review. (#1)

EPA Response: The commenter, as part of the New Jersey Harbor Dischargers Group, has been working with EPA since 1995 and has had access to all HydroQual reports developed for EPA. They also had access to HydroQual as a subcontractor to their contractor the Great Lakes Environmental Center. Therefore, it is EPA's position that the commenter has had ample opportunity to obtain any information it needed, including the atmospheric deposition report

referenced in HydroQual's report.

#### IV. IMPLEMENTATION OF THE NICKEL TMDL IN THE HACKENSACK RIVER

##### A. General

Comment # 16: The TMDL did not include an implementation plan to reduce the nickel loading from BCUA. The commenter recommended the following steps to ensure reductions:

- closely monitor NJ's future implementation plan regarding this TMDL to ensure that the water quality standard for nickel is achieved in a timely manner and within one year of the next re-issuance of BCUA's NJPDES permit.
- EPA issue a federal NJPDES permit to BCUA that imposes a nickel discharge limit that is consistent with the WLA in this time frame if NJ chooses not to establish an appropriate discharge limit for nickel in BCUA's NJPDES permit.

EPA Response: EPA has included an implementation plan in its TMDL support document. EPA developed the implementation plan with the assistance of NJDEP and EPA has concluded that NJDEP intends to implement this TMDL. In addition, EPA will continue to work with NJDEP towards the implementation of this TMDL.

Should NJDEP fail to implement the TMDL, EPA has the authority to review discharge permits on a discretionary basis and to object to any permit that does not meet the guidelines and requirements of the Clean Water Act. Therefore, EPA sees no reason, at this time, to commit to the commenter's recommended steps to insure reductions at BCUA.

Comment # 17: Three commenters questioned the need to use and the feasibility for NJDEP certified laboratories to perform effluent metals analysis using "ultra-clean" techniques. (#s 1, 6, & 7)

EPA Response: Analytical methods for monitoring pollutants in effluent are identified in 40 CFR §136. While all dischargers must use these methods, effluent samples may be collected, shipped, stored and analyzed using "ultra clean" techniques that will meet the monitoring and analytical requirements outlined in 40 CFR §136. It has been EPA's experience that both municipal and contract laboratories are able to implement these "ultra clean" techniques. Use of these "ultra clean" techniques usually result in lower detected concentrations of metals in the effluent when compared to standard techniques. It is beneficial to the discharger to use these "ultra clean" techniques, but it is not required for effluent monitoring. Draft guidance is available regarding analyzing with "ultra-clean" techniques for compliance purposes under the National Pollutant Discharge Elimination System

(NJPDES). This document is entitled "Guidance on the Documentation and Evaluation of Trace Metals Data Collected for Clean Water Act Compliance Monitoring" (EPA 821-B-96-002).

Comment # 18: One commenter is in disagreement with the establishment of a local pretreatment limit for nickel. The commenter states that there has been no significant discharge of nickel from any of its industrial users and that developing a local limit for nickel would impose "expensive and unwarranted monitoring conditions on the current users of..." its system. (#7)

EPA Response: The TMDL does not require the establishment of a local limit for nickel. Instead, the TMDL document states in its proposed implementation plan that the NJDEP should consider whether the NJPDES permit should require the permittees to evaluate the need to establish local limits for nickel. If a WLA does not require a reduction in nickel loading and the facility is able to meet its WLA-based limit, then the establishment of local limits may not be necessary.

Local limits are, however, a current requirement of the pretreatment program. 40 CFR §403.5(c) requires that each Publicly Owned Treatment Works (POTW) develop and enforce specific limits to implement the prohibitions listed in 40 CFR §403.5(a) and (b). The prohibitions include any pollutant that will pass through the treatment plant and cause a violation of any requirement of the NBMUA's NJPDES permit.

The reduction of nickel, if required, is not restricted to the significant industrial users in the service area. As the TMDL notes, NBMUA may choose to impose nickel control requirements for commercial sources if such controls are deemed appropriate. NBMUA may use best management practices and education for domestic source reduction in combination with the pretreatment program to meet the NJPDES permit requirements.

According to EPA requirements, industrial users may use any of the approved methods at 40 CFR Part 136 to monitor for Federal requirements. NBMUA may require specific methods (e.g., ultra clean techniques) to find out whether contamination through the sampling method is a factor, and whether continued monitoring using these methods would be appropriate.

Comment # 19: Since NJPDES permit limitations are enforced monthly, than a methodology for converting the discharge limitation of 3.6 ppb into a permit limitation "should be agreed upon prior to the issuance of the TMDL". (#1)

EPA Response: The methodology for converting the WLA of 3.6 ppb into a permit limitation will be determined in accordance with New Jersey regulations (see N.J.A.C. 7:14a Chapter 13, Appendix A "Calculation of Projected Maximum Effluent Concentration." These regulations are consistent with the procedures

established in EPA's Technical Support Document for Water Quality-Based Toxics Control.

Comment # 20: The commenter requests that EPA postpone the final TMDL and include a schedule to implement a site-specific nickel study. (#1)

EPA Response: The Federal water quality standards regulation [40 CFR Part 131.11(b)(1)(ii)] provides States with the opportunity to adopt water quality criteria that are "modified to reflect site-specific conditions." Adopting site-specific criteria in water quality standards is a State option, not a requirement. To date, EPA has seen no data that indicates a site-specific nickel criteria should be developed for the Hackensack River. EPA will not postpone the establishment of a final TMDL or include a schedule to implement a site-specific nickel study in the TMDL implementation plan.

If, however, data become available that convinces the State that a site-specific nickel study is warranted in the Hackensack River, the State may chose to include such a study in the final implementation plan.

Comment # 21: One commenter questions the feasibility of achieving the discharge limitations. According to the commenter's preliminary analysis, the discharge limits necessary to implement the TMDL may not be achievable by BCUA. BCUA stated that the limitations may result in a potential *de facto* prohibition upon many dischargers from discharging to the system. The commenter requests EPA to perform studies and analyses to verify the feasibility of limits necessary to achieve the proposed TMDL. (#1)

EPA Response: EPA believes that there are a number of methods available to BCUA to meet its required WLA-based nickel reductions. EPA's proposed TMDL implementation plan outlines a two phase nickel reduction plan. The first phase includes a nickel reduction feasibility study to evaluate source reduction and treatment alternatives necessary to meet the proposed nickel limit. Phase I is to be completed by March 2001. The second phase requires the implementation of measures outlined in the feasibility study designed to meet BCUA's WLA-based nickel reductions by July 2006. EPA will work with NJDEP towards implementing this plan, or a NJDEP modified implementation plan, as long as the overall provisions of the TMDL are met.

Comment # 22: One commenter questioned the inclusion of outfall relocation as an implementation alternative for achieving the nickel standard in the Hackensack River. The commenter states that it is premature to make such a decision to relocate the outfall solely to address nickel, since so many other issues remain unresolved (i.e. nutrient loading studies, siting studies, cost and time of construction ). The commenter suggests that decisions for additional treatment or outfall relocation for nickel be based on the outcome of the nutrient studies (#1)

EPA Response: EPA assumes that the outfall relocation study specified in its September 1999 TMDL support document will consider all of the above factors. Outfall relocation was included in the implementation plan as a last resort and would be considered for nickel only if compliance with nickel at the present outfall location proves to be impossible.

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authorized. This authorization becomes ineffective, however, if EPA disapproves the application or withdraws the program authorization.

### III. State Program Description Summary

The following summary of the State of Kansas proposed program has been provided by the applicant.

The Kansas Department of Health and Environment, Lead Poisoning Prevention Program certifies lead professionals, accredits the required training programs, licenses lead activity firms, and enforces the work practice standards for conducting lead-based paint activities and abatement projects. The department operates under the authority of Senate Bill 107 and Kansas Administrative Regulations (1999) 28-72-1 to 28-72-22. Together, these functions fulfill the requirements for an EPA approved State program and ensure the quality of lead abatement and lead-based paint activities conducted in Kansas.

The Lead Poisoning Prevention Program certifies individuals and accredits training programs for the following lead occupations: Lead inspectors, risk assessors, lead abatement workers, lead abatement supervisors, project designers, and lead abatement contractors. For each occupation, an applicant for certification must meet or exceed education and experience requirements, successfully complete an appropriate training program, and score at least 70% on the national 3<sup>rd</sup> party examination for lead inspectors, risk assessors, and lead abatement supervisors all pursuant to regulation. An applicant for a lead abatement contractor has no experience and education requirements. The licensed lead abatement contractor's application includes a statement that it will only hire certified individuals to conduct lead-based paint activities and that it will follow approved work practice standards.

Certified lead professionals must comply with Kansas Work Practice Standards when conducting lead-based paint activities on target housing or child-occupied facilities. These work practice standards ensure that lead-based paint activities are conducted reliably, effectively, and safely. The department has the authority to take administrative or civil actions or seek criminal actions against an entity that violates the work practice standards or fails to comply with any part of the licensure, certification, or accreditation regulations.

The Lead Poisoning Prevention Program staffing consists of the

following: Barry Brooks, Director, Public Service Executive; Sue Bowden, Nurse Consultant, Public Health Nurse; Trent Roehler, Office/Accounting Specialist; Wendy Butler, Intern; and Tom Morey, Health and Environment Consultant.

### IV. Federal Overfiling

Section 404(b) of TSCA makes it unlawful for any person to violate, or fail or refuse to comply with, any requirement of an approved State or Tribal program. Therefore, EPA reserves the right to exercise its enforcement authority under TSCA against a violation of, or a failure or refusal to comply with, any requirement of an authorized State or Tribal program.

### V. Submission to Congress and the General Accounting Office

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before certain actions may take effect, the agency promulgating the action must submit a report, which includes a copy of the action, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of this document in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

### List of Subjects

Environmental protection, Hazardous substances, Lead, Reporting and recordkeeping requirements.

Dated: December 21, 1999.

**Dennis D. Grams,**

*Administrator, Region VII.*

[FR Doc. 00-965 Filed 1-13-00; 8:45 am]

**BILLING CODE 6560-50-F**

## ENVIRONMENTAL PROTECTION AGENCY

[FRL-6523-1]

### CWA 303(d): Final Notice of EPA's Decision To Withdraw the Total Maximum Daily Loads (TMDLs) for Copper in the Arthur Kill and Kill Van Kull and Establish a TMDL for Nickel in the Hackensack River

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of final decision.

**SUMMARY:** EPA has reached the following conclusions regarding certain segments of the New York-New Jersey Harbor: the applicable water quality standard for copper in the Arthur Kill and the Kill van Kull is not likely to be exceeded (i.e., the waters are not water quality-limited for copper) and therefore, no TMDL is necessary for copper; and the Hackensack River below the Oradell Dam is water quality-limited for nickel. Therefore, as part of this action, EPA is establishing a TMDL for nickel in the Hackensack River.

EPA is hereby issuing public notice of: its final decision to withdraw the Phase I copper TMDL in the Arthur Kill and Kill Van Kull established by EPA on January 24, 1996; and its final decision to establish a TMDL for nickel in the Hackensack River.

**EFFECTIVE DATE:** December 27, 1999.

**ADDRESSES:** Copies of the responsiveness summary and relevant supporting documents may be obtained by writing to Ms. Rosella O'Connor, Fate & Effects Team, U.S. Environmental Protection Agency Region 2, 290 Broadway, 24th Floor, New York, New York 10007-1866, oconnor.rosella@epamail.epa.gov, or by calling (212) 637-3823.

The administrative record containing background technical information is on file and may be inspected at the U.S. EPA, Region 2 office between the hours of 8:00 a.m. and 5:30 p.m., Monday through Friday, except holidays. Arrangements to examine the administrative record may be made by contacting Ms. Rosella O'Connor.

**FOR FURTHER INFORMATION CONTACT:** Ms. Rosella O'Connor, telephone number (212) 637-3823.

**SUPPLEMENTARY INFORMATION:**  
I. Background  
II. Public Notice of Draft Decision  
III. Final Determination

### I. Background

A TMDL, or total maximum daily load, is the maximum amount of a pollutant that a waterbody can assimilate and still meet ambient water quality standards. TMDLs are established for water quality-limited segments, which are defined as "any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of technology-based effluent limitations \* \* \*" (40 CFR 130.2(j)).

On January 24, 1996 (61 FR 1930), EPA established certain phased TMDLs, including waste load allocations (WLAs) and load allocations (LAs) for copper

and mercury for specific waters of the New York-New Jersey Harbor. The Phase I TMDLs established in January 1996 required additional data collection in the New Jersey Harbor waters before the establishment, as necessary, of revised Phase II TMDLs. Phase II TMDLs were to be established only if the additional data and/or modeling indicated that it was necessary to reduce point and/or nonpoint sources of certain metals below Phase I levels.

The New Jersey Harbor Dischargers Group (NJHDG), in cooperation with the New Jersey Department of Environmental Protection (NJDEP) and EPA, agreed to undertake the necessary additional ambient and load monitoring and modeling effort necessary to determining if copper, nickel and lead exceeded or potentially exceeded applicable water quality standards in the following New Jersey Harbor waters: Newark Bay, Hackensack River below the Oradell Dam, Passaic River below the Dundee Dam, Raritan River below the Fieldville Dam and Raritan Bay. Based on the results of the monitoring effort, it was determined that copper does not exceed the applicable water quality criteria in any of the above-mentioned waters. Therefore, the Phase I copper TMDLs, for the waters mentioned above, were withdrawn on September 19, 1997 (62 FR 49226). It was also determined that, of all of the above-mentioned waters, only the Hackensack and Passaic Rivers are potentially water quality-limited for nickel and required further assessment and, as necessary, the establishment of TMDLs for nickel. None of the above waters were water quality-limited for lead. The Arthur Kill and the Kill Van Kull were not directly included in this investigation, therefore the TMDLs for copper had remained in effect for those waters. The mercury TMDLs established in 1996 still remain in effect for those waters.

In 1997 and 1998, the NJHDG, NJDEP and EPA completed a monitoring program and water quality modeling to: (1) determine if copper is actually water quality-limiting in the Arthur Kill and the Kill Van Kull; and (2) establish, as necessary, nickel TMDLs for the Hackensack and Passaic Rivers and Newark Bay. The ambient water quality data and modeling evaluation contained in the study entitled, "Monitoring and Modeling of Nickel in The Hackensack and Passaic Rivers and Newark Bay and Monitoring and Data Analysis for Copper in The Arthur Kill and Kill Van Kull", indicate that: (1) copper is not water quality-limiting in the Arthur Kill and the Kill Van Kull, and therefore, the Phase I copper TMDLs (established

January 24, 1996) are no longer necessary; (2) the Hackensack River is water quality-limited for nickel and requires the establishment of a TMDL for nickel; and (3) the Passaic River and Newark Bay are not water quality-limited for nickel and, at this time, do not require TMDLs for nickel.

## II. Public Notice of Draft Decision

EPA's proposed withdrawal for the copper TMDL in the Arthur Kill and Kill Van Kull and its proposed establishment of a nickel TMDL for the Hackensack River was public noticed in the **Federal Register** dated October 28, 1999 (64 FR 58058). A 30-day comment period followed, during which EPA received comments from ten commenters. All comments have been addressed in a responsiveness summary which may be obtained by writing or calling Ms. Rosella O'Connor as referenced above. None of comments received during the public comment period resulted in changes to EPA's proposed actions to withdraw the copper TMDLs in the Arthur Kill and Kill Van Kull and to establish a TMDL for nickel in the Hackensack River.

## III. Final Determination

EPA is noticing its final decision to: (1) Withdraw the Phase I copper TMDLs from the Arthur Kill and the Kill Van Kull because those waters are not impaired for copper and effluent limitations required of point sources under section 301(b) of the Clean Water Act are stringent enough to implement water quality standards for copper applicable to such waters (i.e., these waters are not water quality-limited for copper) and (2) the proposed establishment of a TMDL for nickel in the Hackensack River. EPA is establishing the nickel TMDL in the Hackensack River at the request of the New Jersey Department of Environmental Protection. These actions are appropriate given the specific circumstances, original and additional monitoring data, and management approach agreed upon by the States of New Jersey and New York and EPA for the waters of the New York-New Jersey Harbor.

The supporting technical documentation for these actions is contained in Withdrawal of Total Maximum Daily Loads (TMDLs) for Copper in the Arthur Kill and Kill Van Kull and Establishment of a TMDL for Nickel in the Hackensack River (EPA, December 1999) and "Monitoring and Modeling of Nickel in The Hackensack and Passaic Rivers and Newark Bay and Monitoring and Data Analysis for Copper in The Arthur Kill and Kill Van

Kull" (Great Lakes Environmental Center, 1998).

The determination that TMDLs for copper are no longer necessary in the Arthur Kill and Kill Van Kull is based on additional monitoring data and modeling conducted by the NJHDG's consultant, with assistance from EPA. Monitoring and modeling projections included more recent municipal plant effluent data and New Jersey storm water and combined sewer overflow data. Previous modeling projections and TMDLs were based on New York storm water and combined sewer overflow data. These data were used due to a lack of data for New Jersey storm water and combined sewer overflows. The more recent storm water and combined sewer overflow data are much lower than the original estimates. The data and modeling projections now indicate that the applicable copper criterion is not likely to be exceeded in these waters. Therefore, the Arthur Kill and Kill Van Kull are not water quality-limited for copper and do not require TMDLs. EPA has made a final decision to withdraw the TMDLs for copper in the Arthur Kill and Kill Van Kull.

Analysis of ambient data and modeling projections in the Hackensack River indicate that the applicable nickel criterion of 8.2 µg/L (expressed in the dissolved form) is likely to be exceeded, and therefore, a TMDL is required. NJHDG's consultant developed a water quality model to facilitate the development of a TMDL. Modeling projections indicate that the Hackensack River is an effluent-dominated river. The ambient nickel concentration is driven by the concentration of nickel in the Bergen County Utilities Authority (BCUA) discharge. BCUA represents the largest source of nickel to the River. Other smaller sources include: North Bergen Sewage Treatment Plant, Secaucus Sewage Treatment Plant, combined sewer overflows (CSOs), storm water, atmospheric deposition and background (upstream sources). Using the calibrated water quality model, EPA calculated a TMDL of 4.98 lbs/day of nickel which will meet the applicable nickel criterion, taking into account seasonal variations and critical conditions, and including a margin of safety. The TMDL was allocated to point sources (waste load allocations) and nonpoint sources (load allocations). The existing loads of nickel, waste load allocations (WLA), and load allocations (LA) needed to achieve the TMDL are shown below. The WLA for BCUA represents a major reduction in nickel load to the Hackensack River. This reduction will result in meeting the applicable water quality criterion for

nickel. Because the other loads represent relatively small contributions, and reducing their load has little or no impact on receiving water quality, no other reductions are required at this time.

TABLE 1.—TMDL/WLAS/LAS FOR NICKEL IN THE HACKENSACK RIVER.

Source	Existing load (lbs/day)	WLA/LA (lbs/day)
BCUA [NJ0020028] .....	11.3	<sup>1</sup> 2.2
North Bergen STP [NJ0034339] .....	0.28	<sup>2</sup> 0.38
Secaucus STP [NJ0025038] .....	0.04	<sup>3</sup> 0.06
CSOs .....	0.10	0.10
Storm Water .....	0.81	0.81
ΣWLAs .....		3.55
Atmospheric .....	1.06	1.06
Boundary (Background) <sup>4</sup> .....	0.37	0.37
TMDL .....		4.98

<sup>1</sup>The WLA of 2.2 lbs/day is established at an effluent concentration of 3.6 µg/L (total recoverable) and flow of 75 mgd; if the effluent flow is 109 mgd, the WLA is 3.3 lbs/day with an effluent concentration of 3.6 µg/L.

<sup>2</sup>Based on design flow of 10 mgd and mean effluent concentration of 4.6 µg/L (total recoverable).

<sup>3</sup>Based on design flow of 5.12 mgd and mean effluent concentration of 1.5 µg/L (total recoverable).

<sup>4</sup>Calculated at the boundary condition of the Hackensack River upstream at the Oradell Dam.

This action has no effect on the TMDLs for other pollutants established for these waters.

Dated: December 27, 1999.

Jeanne M. Fox,

Regional Administrator, Region 2.

[FR Doc. 00-962 Filed 1-13-00; 8:45 am]

BILLING CODE 6560-50-P

## ENVIRONMENTAL PROTECTION AGENCY

[FRL-6523-5]

### Proposed Reissuance of General NPDES Permits (GP) for Alaskan Mechanical Placer Mining (Permit Number AKG-37-0000) and Alaskan Medium-Size Suction Dredging (Permit Number AKG-37-1000)

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of proposed reissuance of two general permits.

**SUMMARY:** On June 30, 1999, two general permits regulating the activities of mechanical placer mining and suction dredge mining for gold placer mining operations in the State of Alaska

expired. EPA proposes to reissue these two general permits with minor changes based on updated information relating to the impact of such mining activity on the environment. EPA is proposing to make these permits effective some time after the 2000 mining season and at the same time revoking coverage under the 1994 modified general permits. This is also notice of EPA's issuance of a Finding of No Significant Impact (FNSI) for NPDES permit AKG-37-0000.

**DATES:** Interested persons may submit comments on the proposed reissuance of the GPs to EPA, Region 10 at the address below. Comments must be received by March 14, 2000. Public Hearings are scheduled in Anchorage and Fairbanks. The Anchorage hearing will be held on February 29, 2000, from 6:00 pm until 9:00 pm. The Fairbanks hearing will be held on March 7, 2000, from 6:00 pm until 9:00 pm.

**ADDRESSES:** Comments on the proposed General Permits and the Finding of No Significant Impact should be sent to Director, Office of Water; USEPA Region 10; 1200 Sixth Avenue, OW-135; Seattle, Washington 98101. The Anchorage public hearing will be held at the Days Inn Conference Center, 330 E. 4th Avenue. The Fairbanks public hearing will be held at the Carlson Center, 2010 Second Avenue, Pioneer Room.

**FOR FURTHER INFORMATION CONTACT:** Copies of the Proposed General Permits and Fact Sheets are available upon request. The General Permits and Fact Sheets may be found on the Region 10 website at [www.epa.gov/r10earth/offices/water/npdes.html](http://www.epa.gov/r10earth/offices/water/npdes.html). Requests may be made to Audrey Washington at (206) 553-0523 or to Cindi Godsey at (907) 271-6561 or electronically mailed to: [washington.audrey@epa.gov](mailto:washington.audrey@epa.gov) or [godsey.cindi@epa.gov](mailto:godsey.cindi@epa.gov)

## SUPPLEMENTARY INFORMATION

### Executive Order 12866

The Office of Management and Budget has exempted this action from the review requirements of Executive Order 12866 pursuant to section 6 of that order.

### Regulatory Flexibility Act

After review of the facts presented in the notice printed above, I hereby certify pursuant to the provision of 5 U.S.C. 605(b) that this reissuance of these GPs will not have a significant impact on a substantial number of small entities. Moreover, the permit reduces a significant administrative burden on regulated sources.

Dated: January 7, 2000.

Randall F. Smith,

Director, Office of Water, Region 10.

[FR Doc. 00-960 Filed 1-13-00; 8:45 am]

BILLING CODE 6560-50-P

## EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

### Sunshine Act Meeting

**AGENCY HOLDING THE MEETING:** Equal Employment Opportunity Commission.

**DATE AND TIME:** Tuesday, January 25, 2000 at 2:00 P.M. (Eastern Time).

**PLACE:** Conference Room on the Ninth Floor of the EEOC Office Building, 1801 "L" Street, NW, Washington, D.C. 20507.

**STATUS:** The meeting will be closed to the public.

### MATTERS TO BE CONSIDERED:

#### Closed Session

Review of Pending Litigation.

**Note:** Any matter not discussed or concluded may be carried over to a later meeting: (In addition to publishing notices on EEOC Commission meetings in the **Federal Register**, the Commission also provides a recorded announcement a full week in advance on future Commission sessions.)

Please telephone (202) 663-7100 (voice) and (202) 663-4074 (TTD) at any time for information on these meetings.

**CONTACT PERSON FOR MORE INFORMATION:** Frances M. Hart, Executive Officer on (202) 663-4070.

This Notice Issued January 12, 2000.

Frances M. Hart,

Executive Officer, Executive Secretariat.

[FR Doc. 00-1106 Filed 1-12-00; 2:49 pm]

BILLING CODE 6750-06-M

## FEDERAL HOUSING FINANCE BOARD

[No. 2000-N-1]

### Federal Home Loan Bank Members Selected for Community Support Review

**AGENCY:** Federal Housing Finance Board.

**ACTION:** Notice.

**SUMMARY:** The Federal Housing Finance Board (Finance Board) is announcing the Federal Home Loan Bank (Bank) members it has selected for the 1998-99 eighth quarter review cycle under the Finance Board's community support requirement regulation. This notice also prescribes the deadline by which Bank members selected for review must